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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,743	08/31/2001	Tatsuo Saishu	213539US-2SRD	1003

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EXAMINER

LAO, LUN YI

ART UNIT PAPER NUMBER

2673

DATE MAILED: 09/25/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,743

Applicant(s)

SAISHU ET AL.

Examiner

Lao Y Lun

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 8 and 15 is/are allowed.
- 6) ☐ Claim(s) 2, 4-7, 9, 11-14, 16 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 3, 10 and 17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claims 5-6, 12-13 and 19-20 are objected to because of the following informalities:

The limitation of "said first period includes at least one field which remains in said three or more fields" cited in claims 5-6, 12-13 and 19-20 should be changed to "said first period includes at least three or more fields".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 4-7, 9, 11-14, 16 and 18-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Asao et al(6,577,289) in view of Ito et al(6,172,662).

As to claims 2, 4-7, 9, 11-14, 16 and 18-21, Asao et al teach a liquid crystal display comprising: a ferroelectric liquid crystal

material(85) which is held between a pair of electrode substrates(82a, 82b) and whose optical response is asymmetric with respect to the polarity of a voltage applied(see figures 7, 10; column 12; lines 44-55; column 10, lines 40-52; column 23, lines 33-37); and polarity controller which reverses the polarity of the image signal in one frame period, said polarity controller being configured to apply the image signal(Vpix) of a first polarity(positive polarity) for each field in a first one of two successive periods(1F, 2F), and to apply the image signal(Vpix) of a second polarity opposite to the first polarity(negative polarity) and of fixed amplitudes for each subsequent field in a second one of the two successive periods(1F, 2F)(see figures 11, 14 and column 22, lines 41-61).

Asao et al fail to divide a frame into a plurality of fields.

Ito et al teach an LCD display comprising a frame with a plurality of fields(1f-4f)(see figures 21-22). It would have been obvious to have modified Asao et al with the teaching of Ito et al, so as to create the animation picture to a viewer.

As to claims 5-6, 12-13 and 19-20, Ito et al teach one frame consisting more than three fields(see figures 5-6).

As to claims 4, 7, 11, 14, 18 and 21, Asao et al teach a second polarity(negative polarity) is a polarity in which a

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smaller optical response($T_2 < T_1$) of said ferroelectric liquid crystal material(see figures 7 and 14).

Allowable Subject Matter

4. Claims 3, 10 and 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. claims 1, 8 and 15 are allowable.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida et al(6,496,170) teach a liquid crystal having an asymmetric optical response(see figures 14-15).

Hamano(5,561,441) teaches an LCD display having a positive field and a negative field.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

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Any response to this action should be mailed to:

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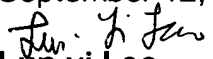
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Technology Center 2600 Customer Service Office
whose telephone number is (703) 306-0377.

September 12, 2003


Lun-yi Lao
Primary Examiner